DOCUMENT RESUME

ED 338 427 PS 020 034

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TITLE Social and Behavioral Characteristics of Chinese Only Children and Its Research Concern.
PUB DATE Apr 91
NOTE 41p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Seattle, WA, April 18-20, 1991).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Antisocial Behavior; *Behavior Problems; Classroom Observation Techniques; Foreign Countries; *Individual Differences; Prosocial Behavior; *Research Methodology; Research Needs; *Social Behavior; Social Characteristics; *Social Development; Statistical Analysis; Test Reliability
IDENTIFIERS Child Behavior; *China; *Only Children; Population Control

ABSTRACT

This study reviews the literature on the social and behavioral characteristics of only children in China. Of 16 studies that reported differences in the characteristics of only and non-only children, only 2 indicated that only children exhibited more socially desirable behaviors than did non-only children. The remaining studies reported that, compared with non-only children, only children were more spoiled, more selfish, less independent, and showed less emotional well-being. However, 13 studies found no differences between only and non-only children. These studies generally concluded that the number of misbehaving children is smaller than the number of well-behaved children regardless of sibling status; and the differences between only and non-only children are quantitative rather than qualitative, and less than the differences within the groups themselves. Further research must consider: (1) the effects of multiple factors, such as parents' formal certificate for having only one child, the one-child policy itself, and the availability of playmates; (2) children as active interactors with their environment; and (3) cultural differences between Chinese and Western children. Future research must correct the methodological shortcomings of existing studies. These shortcomings include an over-reliance on classroom observation and questionnaires, and poor test reliability. A list of 57 references is included. (BC)

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Social and Behavioral Characteristics of Chinese Only Children and its Research Concern

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Paper presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA. April, 1991

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Abstract

Results of a large number of studies focusing on social and behavioral characteristics of only children in China are mixed. Methodological flaws may have contributed to the variability of results. Many of these studies confounded variables, used instruments of doubtful validity, relied on poor observational protocols, and used inappropriate statistical analyses. These issues are discussed in the interest of considering future research regarding single-child families. More dynamic, system-wide factors in the social development of only children should be considered. Cross-cultural comparisons should also be undertaken in order to develop a fuller understanding of the impact of social, political, cultural, and educational factors on family planning and child development.

Importance of the Problem

With a current population in excess of one billion, there is little doubt of China's need to control its own growth. Left uncontrolled, it is estimated that the population in China would rise to nearly 1.5 billion in the next decade and to over 4 billion by 2080. If each Chinese family were to limit itself to "zero population growth" (i.e., two children), the prediction is of a population of 1.2 billion by the year 2000 and an eventual stabilization at just under 1.5 billion (Leo, 1982).

This burgeoning population has placed great pressure on China's economic development and ecological equilibrium. As a developing country, China is ill equipped to support this tremendous population. Compared with the world's average per capita for natural resources, China has only 30% of cultivatable land, 13% in forest, and 27% in fresh water. China's GNP per capita stands at 14% of the world's average (Wang, 1987). Continuing rapid population growth would more than offset current efforts at economic development, and would exacerbate social problems such as housing shortages and unemployment. In order to realize the national goal of "four modernizations" in agriculture, industry, national defense, and science and technology by the turn of the century, controlling population growth has become an essential policy in contemporary China.

From 1979 to the present, the Chinese government has advocated a policy of encouraging couples to bear only one child. This policy has achieved significant success. The birth-rate dropped from 24.6 per thousand in the 1970s to 18.3 per thousand

in the past ten years. The annual average population growth rate went from 19.2 per thousand in the 1970s to 12.9 per thousand in the 1980s. This has been accomplished, in large part, by a decrease in family size; the proportion of households with only one child increased from 30.9 percent in 1970 to 51.7 percent in 1987 ("More People," 1989).

China's population control policy, however, has also brought about a striking reality: the future of China will rely almost entirely on a generation of only children. This not only constitutes a radical departure from the traditional composition of the Chinese family, but is bound to effect child rearing practices and the childhood experiences of the current cohort of children. The development of only children, therefore, is an important issue in China which cannot be ignored.

During the past decade a considerable amount of research comparing only and non-only children has been conducted in China. The results, however, are equivocal. In terms of intellectual capacities, studies are consistent by reporting that only children are superior or at least equal to their "non-only" age-mates in language ability, imagination, and productive thinking (Gao, 1981; Poston & Yu, 1985; Wang et al., 1983). Compared with non-only children, only children are also often described to demonstrate higher academic achievement in their school work (Liao, 1981; Yang, Kao, & Wang, 1980; Yang & Sun, 1981; Zha, 1983, 1985). These results correspond to those obtained by researchers examining the intellectual characteristics of only children in the West (Falbo, 1987). Findings regarding social or

behavioral characteristics of only children, however, are more mixed: only children have been placed above, below, and at par with non-only children in different studies. In order to conduct more sound and high-quality research on the psychosocial development of Chinese only children, it is important to review the existing literature and evaluate the current state of these research findings in light of the strengths and weaknesses of the studies themselves.

Studies to Date of Only Children in China

Scholars from the People's Republic of China have produced a number of studies examining social and behavioral characteristics of only children in China. The results of these studies are heterogenous. Some have found that only children generally exhibit more negative and undesirable behaviors than non-only children, others have found no overall differences between the two groups of children, and still others have reported that only children even scored higher in some behavioral perspectives.

Studies of social and behavioral characteristics of only children in China started in 1980. One of the first surveys was conducted by a Shanghai Preschool Educational Research Group (1980). This study compared a sample of 70 only children with 30 non-only children on eight undesirable behavioral traits and found that only children demonstrated a higher percentage of all eight behaviors than their sibling counterparts (see Table 1). Additionally, 30% of the only children demonstrated difficulties engaging in cooperative activities, while only 7% of the non-only

children exhibited these uncooperative behaviors in group activities (No statistical evaluation of these results was reported in the study).

Insert Table 1 about here

Following the survey of Shanghai Preschool Educational Research Group, similar findings were later reported in various studies conducted in a variety of settings (Gao, 1981; Jiao, Ji, & Jing, 1986; Liu, 1981; Ma, 1988; Nanjing, 1981; Tao & Chiu, 1985; Tan, 1989; Tang, 1982; Wang et al., 1983; Wang & Ma, 1985; Yang & Sun, 1981; Yu, 1988; Zhou, 1982). Yang and Sun (1981), for instance, compared undesirable behavioral traits between only and non-only children in three age groups: infancy (18 months to 3 years), preschool (3 to 6 year olds) and elementary school (7 to 12 year olds). After one month of classroom observations, they found that 22% of the 86 only children in the infant group demonstrated arbitrariness, 18% exhibited hostility to others, and 19% had discipline problems. In comparison, only 11%, 8%, and 16% of the 36 non-only children they observed showed these undesirable behaviors.

Among the 180 only and 130 non-only preschoolers Yang and Sun studied, not only were a higher percentage of undesirable behaviors again found with the group of only children, the percentages were also higher than had been found in the infant group. Compared with only children in the infant group, only children between the ages of 3 and 6 were 11% higher for the

discipline problems, 12% higher for hostility to others, and 9% higher for arbitrariness.

Yang and Sun's elementary school sample consisted of 233 only children and 716 non-only children. They found that although there were consistently higher percentages of undesirable behavioral characteristics for the only children than for the non-only group, this elementary school onlies were better socialized overall than the two younger groups. Compared to the preschool group, the proportion of elementary school only children displaying undesirable behaviors was 27% lower for discipline problems, 20% lower for hostility to classmates, and 13% lower for ratings of arbitrariness.

Yang and Sun (1981) concluded that only children generally developed less well than non-only children in terms of their social and behavioral characteristics. Undesirable behaviors seemed to emerge during infancy and remain an issue in early childhood. With increasing socialization, however, these behaviors appeared to diminish in elementary school. Yang and Sun interpreted this developmental pattern to suggest that behavioral characteristics were dynamic or changeable, and that school seemed to play an important role in modifying undesirable behaviors.

Another study comparing social behaviors of only and non-only children in different age groups was reported by Wang et al. (1983). They examined 101 only children and 83 non-only children from kindergarten to senior high school in the city of Shenyang, Northeastern China. The two groups were matched for age, gender,

and parents' educational and professional background. No direct behavioral observations were made. Parents, teachers, and classmates were asked to check eleven behavioral items with either "pass" or "fail" responses (see Table 2). Wang et al. (1983) found fairly large differences between only and non-only children, with non-only children performing better than only children in eight of the eleven items at some of the age levels studied. These differences were most apparent in the junior high school groups.

Insert Table 2 about here

The studies by Wang et al. (1983) and Yang and Sun (1981) diverge substantially concerning the ages at which they found the greatest differences between the behaviors of only and non-only children during the preschool years (Yang & Sun, 1981) or during early adolescence (Wang et al., 1983). This substantial discrepancy requires further examination and explanation. It is not clear why Yang and Sun (1981) found preschool differences while wang et al. (1983) did not, nor it is possible to compare the two studies at the upper end of the age range, as Yang and Sun's oldest group was in elementary school. Wang et al. (1983) attribute the differences they obtained in junior high school to age related changes in social orientation often observed during puberty. Although these changes are less dramatic than those observed in Western countries, teenagers in China do also begin to develop a new degree of self-consciousness, independence, and

competence. Wang et al. speculated that because only children are subject to greater parental protection, they develop these newly emerging social characteristics more slowly. Compared with non-only children, they would therefore generally demonstrate behaviors which are considered more childlike and undesirable (Wang et al., 1983). It is not clear, however, why these researchers failed to corroborate Yang and Sun's (1981) results at the younger end of their sample.

Significant differences with regard to social/behavioral qualities between only and non-only children have also been reported by other studies (Jiao, Ji, & Jing, 1986; Liu, 1981; Ma, 1988; Nanjing, 1981; Tao & Chiu, 1985; Tan, 1989; Tang, 1982; Wang & Ma, 1985; Yu, 1988; Zhou, 1982). The most methodologically sophisticated study of this group was done by Jiao, Ji and Jing (1986). They studied 180 pairs of children in kindergartens (4-6 years old) and primary schools (7-10 years old). The subjects were from both rural and urban areas of Beijing and were matched for age, gender, size of family, and family social-economic status. Based on pilot interviews with the parents and school teachers regarding age appropriate desirable and undesirable behaviors, seven behavioral items were chosen for further investigation (see Table 3). Two to four open-ended interview questions were then formulated for each of these seven items. The children were asked to participate in a "peer review": answering questions about the other children in their class. The children's ratings revealed that the only children in class were considered to be more egocentric,

whereas the children with sibling(s) were considered to exhibit more of the positive qualities of persistence, cooperation, and peer prestige. The study also indicated that in the Beijing area children's behavioral qualities were not associated with occupation and educational background of parents, nor family structures (e.g., number of generations living together).

Insert Table 3 about here

Recent studies by Ma (1988) and Tan (1989) also found only children to be at some disadvantage relative to their non-only peers in terms of social and behavioral aspects. Ma (1988) found that only children were generally more dependent in decision making than non-only children, while Tan's kindergarten classroom observations (1989) indicated that the more only children a classroom had, the greater the likelihood of conflict among children in the class.

While the five studies described above found consistent social and behavioral differences between only and non-only children which favored those children with siblings, other studies found no overall differences between these two groups (Chen, 1985a, 1985b; Lin, 1986; Mao, 1984, 1987; Tseng et al., 1988; Wu, 1988; Zhang, 1986), and even some reported an "only child's advantage" on certain social characteristics (Falbo, Ji, Jiao, & Jing, 1986; Xiao, 1981).

In the same year that the Shanghai Preschool Educational Research Group conducted its survey, Poston and Yu (1985) used a

similar methodology (classroom teachers' evaluation based on the researcher designed protocol) in the city of ChangSha, Hunan Province. Poston and Yu (1985) reported that, with three exceptions (bad eating behavior, carelessness of property, and fascination with fancy dress), there were no significant differences between only children and non-only children. In fact, the only children were evaluated as being more co-operative and less hostile to others than the children with siblings. Table 4 presents conflicting results reported by Shanghai Preschool Educational Research Group (1980) and by Poston and Yu (1985). The reasons for this difference is unclear. Perhaps there are regional differences in child rearing that contribute to the behavior of only children. Since the earlier study has become a standard in the field, it is noteworthy that another investigation using a similar methodology has yielded substantially different results (See also Falbo, 1987, for a similar observation). At least, the Poston and Yu's (1985) study does suggest that the behavioral differences observed in Shanghai may not be as widespread as the members of the Shanghai Preschool Educational Research Group indicated.

Insert Table 4 about here

In Beijing, Wan, Fan, and Lin (1984) studied 138 five- to seven-year-old only children and 127 non-only children of the same age. Five behavioral categories (independence, helpfulness, dependency, aggressiveness, and friendliness) were recorded by

internship students who were blind to the children's family composition. Parents also filled out detailed questionnaires regarding their children's behaviors. The results indicated few differences between the only and non-only children out of the five behavioral categories and the three age groups. Differences between only and non-only children were found in only one age group with one category: the only children in the 5-year-old group had significantly lower scores for independence than did their siblinged counterparts. An analysis of the questionnaire responses from the subjects' parents also resulted in few differences in these behaviors between only and non-only children. Similarly, Mao (1984) found few differences when adaptive behaviors were examined using classroom teachers' observation and parents' questionnaires.

Tseng et al. (1988) compared behaviors of only and non-only children in the city of Nanjing and in two surrounding rural areas. Using a Chinese version of Achenbach's Child Behavior Checklist to assess behavior problems, Tseng et al.'s analysis yielded a complex pattern of differences which were not amenable to generalization. Only boys did not differ significantly from non-only boys in their overall profile of behavior problems, while only girls were found to have significantly higher mean scores on depression and moodiness than their non-only counterparts (see Table 5). However, Tseng et al. argued that on the average, scores in the Chinese samples were not clinically significant, as compared with clinical norms of the Child Behavior Checklist for American children.

Insert Table 5 about here

In sum, a considerable amount of research comparing the behavior of China's only and non-only children has been conducted over the past decade. The findings, however, have consistently been inconsistent. Table 6 summarizes the reviewed research findings on the comparison of social and personal behaviors of only and non-only children. Among the 16 studies reporting

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Insert Table 6 about here

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only children to differ from non-only ones (Falbo, et al., 1986; Gao, 1981; Jiao, Ji, & Jing, 1986; Liu, 1981; Ma, 1988; Nanjing, 1981; Shanghai Preschool Educational Research Group, 1980; Tao & Chiu, 1985; Tan, 1988; Tang, 1982; Wang et al., 1983; Wang & Ma, 1985; Xiao, 1981; Yang & Sun, 1981; Yu, 1988; Zhou, 1982), only the studies done by Falbo, et al. (1986) and Xiao (1981) indicated that only children performed better than non-only children in terms of socially desirable behaviors -- cooperation with others, self-care, and tractability. The remaining 13 studies exclusively described only children as maladaptive in their social, moral, and personality development. Compared with non-only children, only children were constantly reported more spoiled, more selfish, less independent, and demonstrating less emotional well being. Chinese scholars do not view these problematic behaviors as irremediable, but as the result of a

home environment that yields less than desirable socialization to a cultural based on cooperation and collective effort. Researchers point particularly to the lack of home experience with other children and inappropriate parental styles of child rearing. Without presence of siblings at home, for instance, the only child is able to attract all of the attention from parents and other adults in the household. At home, only children experience what has been called "4-2-1 Syndrome"; four grandparents and two parents funnel all of their attention to the single child. This special home environment may lead to a certain impoverishment of social perspective-taking, willingness to share, and interest in helping others.

Among the studies which reported no overall differences between only and non-only children (Chen, 1985a, 1985b; Li & Zhang, 1984; Lin, 1986; Lu, 1986; Mao, 1984, 1987; Poston & Yu, 1985; Tseng et al., 1988; Wan, 1984; Wan, Fan, & Lin, 1984; Wang & Ma, 1985; Wu, 1988; Zhang, 1986), the general consensus can be summarized as follows: (1) The proportion of children who behave inappropriately is always smaller than those who are well-behaved, regardless of whether they are only or non-only children. (2) Undesirable behaviors appeared differently in different geographic areas. For instance, only children in Shanghai are more likely to show a fascination with fancy dress than are only children of other cities. These geographic differences may reflect difference in the degree of Westernization, which run counter to many traditional Chinese values. (3) School based socialization plays an important role

in changing children's undesirable behaviors; the more experience the only children have with collective setting, the less they exhibit undesirable behaviors. (4) Differences of only and non-only children are quantitative rather than qualitative. Although only children are sometimes found inferior to non-only children with regard to cooperation with others, care for public property, and other pro-social behavior, these differences are a matter of degree, and not of kind. (5) Differences between only and non-only children are not bigger than observed differences within these two groups. There is generally more variability in the ratings of only children who, as a group, are more likely to show both extremes of social behaviors and personality characters than their less variable siblinged peers.

Discussion and Recommendations

Although comparative study of social and behavioral Characteristics of Chinese only and non-only children has been active for about ten years, the results of this work are still far from clear-cut. Over the past five years, the bulk of the research has yielded no overall differences between only and non-only children (see Table 6), yet more sophisticated studies are still needed before such a conclusion could be offered with any confidence. To date, most of the research that has been reported is conducted by people unfamiliar with sophisticated methodology or theory. This should be understandable in light of the fact that the current generation of Chinese scholars and researchers have received a rather impoverished training. Social psychology

had been cast away in China for nearly thirty years as a pseudo-science. It is only in the past ten years that this discipline has been re-established; even so, social psychology is still not considered a major area of concentration in today's Chinese psychology (Ching, 1980, 1982). Such circumstances make it almost impossible to find well-documented, methodologically sound research on the study of psychosocial aspects of only children. The need for Chinese scholars to conduct more research firmly grounded in a strong conceptual and methodological base warrant some discussion.

First of all, in studying of the development of only children Chinese researchers must consider the effects of multiple factors as well as their interactions. Needless to say, "only" children refer to the absence of siblings in the child's experience of a family. Sibling status is, therefore, a salient variable for the development of only children. Yet, this variable is not sufficient to explain all of the reported differences between only and non-only children; for any individual, the impact of the "environment" is the result of multiple influences (Shaffer, 1988; Wu, 1989; Zigler & Finn-Stevenson, 1987). It is encouraging that most Chinese researchers have begun to investigate the effects of multiple factors to the development of only children, taking into account the influences of social/economic status, parental rearing styles, or children's early experience with collective setting. However, many factors remain to be considered; and it is important that future research makes such efforts.

One such factor is the difference between holders and non-holders of "one-child certificates" (Wu, 1989). In China, if parents are willing to answer the government's call to have only one child, they generally receive a "one child certificate" after the child's birth, which insures the medical benefits for their child (Ching, 1982; Kallgren, 1986). Although certificate holding parents cannot truly be considered volunteers, given the extremely heavy pressure exerted by the government to adhere to the policy, parents who commit to having a single child and who receive the benefits which the certificate provides are likely to represent a different group than those parents of only children who do not make this commitment. Support for this notion of different "kinds" of parents comes from an Anhui Province Survey of one-child families (Population Research Office, 1982). This survey reported that the certificate holders as a group had more sons, higher educational level, and more intellectual professions than did non-certificate holders (see Table 7). These parental differences are very likely to have some impact on the personality development of their children.

Another factor which needs to be examined is the impact of the one-child policy itself on the development of only children. In some of the studies discussed above, researchers have failed to recognize that there are two major cohorts of only children in China; those born before 1979 and those born after (e.g., Chen, 1985a, 1985b). In his study, Chen examined undesirable behavioral characteristics of only children across a wide age span -- from 4 to 12 year olds. The researcher failed to note,

however, that only children who were older than 6 years old at the time the study conducted were born before the one-child policy. It is likely that "pre-policy" parents of only children were a less heterogenous group: less traditional, more educated, or parents with health or fertility problems (Chen & Kols, 1982). In contrast, today's new parents know long before their child is conceived that it will be their only one, despite the fact most of them would prefer larger families. There is likely to be a difference between parents who choose independently to have only one child and those who have to accept this government sponsored decision. That there would be accompanying differences in the nature of parent-child relations is also varied. Perhaps there are, in fact, three groups of single child's parents: (1) those who made an active choice to limit their family size; (2) those who know that they will only have one child, but would choose to have more if they could; (3) those who intended to have more children but were unable to. The effect of the government policy on parent-child relationships needs further consideration in future study of development of only children.

The third factor requesting attention is the availability of playmates. One effect of the successful implementation of the one child policy has been to reduce children's chances of finding playmates of the appropriate age or sex so that they can enjoy unsupervised, spontaneous neighborhood play. Such environmental changes could have direct or indirect influences on only children's experiences of sharing and cooperating. While most of the focus of current studies has been on the child's home

experiences, it is also essential to examine the effect of the policy on children's patterns of friendship and play.

The fourth factor requesting attention is the interactions among factors, which, unfortunately, have been rarely examined or reported in the Chinese studies. For instance, several studies have considered parents' educational level and geographic location as factors influencing the social behaviors of only children (Chen, 1985a, 1985b; Jiao, Ji, & Jing, 1986; Li & Zhang, 1984; Wang & Ma, 1985). However, none of these studies examined possible co-variations or interactions between these two factors. In general, people living in urban areas of China are much better educated than those residing in the countryside. If, as many of the Chinese studies have suggested, the higher the parents' educational level, the fewer social or behavioral problems only children exhibit, then differences between urban and rural only children may have less to do with geographic location per se than with parents' educational level. Chinese investigators need to apply either statistical techniques or broad theoretical frameworks to their studies in an effort to develop a coherent and plausible explanation of the factors that influence the development of only children.

In terms of theoretical frameworks, several issues need to be addressed in future work. First, children are active interactors of the environment and not passive recipients of social input. Almost all of the studies reviewed above interpreted observed differences between only and non-only children as the result of environmental factors, such as lack of

experiences with other children at home or inappropriate parental rearing styles. None of the studies, however, acknowledged that a child's behavior cannot be explained solely by the social inputs received. Rather, children themselves are active agents in creating the social experiences that influence their development. Children participate in determining the nature of their social relations and bring their own dispositions and characteristics to any interaction they have. This is why under similar situations, we can find different patterns of behavior among groups of only children and also find similar behavioral patterns among only children in situations which are dissimilar. The cultural traditions of Chinese society are most consonant with a behavioral modification or social learning perspective of the mechanisms for effecting change in individuals (Gardner, 1989; Tobin, Wu, & Davidson, 1989). However, without considering a child as an active interactor, efforts to modify or develop the characteristics of only children would be unsuccessful. In addition to environmental factors, individual factors such as the child's temperament and factors relating to the developmental status of the child need to be considered and measured in the study of the social development of only children.

Although there may, in fact, be real and consistent differences between only and non-only children, future research should be directed toward the variability within the population of only children. Since between 80-90% of the preschoolers currently in urban kindergarten are only children (Tseng et al., 1988), it is important to examine more closely the range and

variation within this group. Not only are only children the current norm by sheer force of numbers, but they, rather children with siblings, are representive of current Chinese society. In contemporary China children are likely to have siblings because their families are atypical in some warp: they represent minority nationalities, have handicapped children, or some other unusual characteristics (Wang, 1987). As the policy has been in force for longer and longer, it is becoming increasingly difficult to make any study principled matches between only and non-only children. It should be possible, however, to examine the fundamental issues about the socialization of China's next generation without recourse to comparisons between only and non-only children. For instance, since it has been argued that personality formation is developmental process (Damon, 1983; Zigler & Finn-Stevenson, 1989), it is important to explore behavioral continuities and discontinuities in the development of only children. Longitudinal studies of this issue could provide in-depth information about this process.

Another issue requiring attention is the discrepancy between only children's understanding of social rules and their actual behavior. In a study of children's concepts of friendship, Lin (cited in Jing, Wan, & Over, 1987) reported that although only children could identify socially desirable behaviors, such as friendliness, helpfulness, or self-care skills, these correct judgments were often contradicted by children's actual behavior manifestations. Some of this discrepancy may be accounted for by general developmental characteristics of young children, such as

lack of self-control ability. These, however, would not explain differences between only and non-only children. Since only children have been found to be as competent intellectually as their non-only peers (Falbo, 1987; Yang, Kao, & Wang, 1980), one would expect corresponding similarities for their social and behavior understanding, as cognitive ability and level of social cognition are generally considered to be parallel developmental process (Damon, 1983; Shantz, 1983). Closer examination is needed of discrepancy between social awareness and social behaviors. Results of such work may help to suggest ways to facilitate desired prosocial behaviors in only children.

A fourth issue for future work involves investigation of the extent to which cultural differences effect the experiences of only children (Jing, Wan, & Over, 1987). To date, the phenomenon of single child families in China has largely been treated implicitly as if it were independent of cultural context. Western studies are often cited to support results of Chinese investigation (Mao, 1984, 1987; Poston & Yu, 1985; Wan, 1984); this tendency to import results across cultures needs to be done with caution. Even setting aside for the moment the general differences between China and the West regarding child rearing practices and values, there are different mechanisms operating by which single child families are created in these two cultures (Blake, 1981). There are far more single child families in Western countries as a result of divorce than in China, where the vast majority of only children live in intact two-parent families. Maternal characteristics are also different. Married

women in Western countries who have voluntarily one child are more likely to come from non-traditional backgrounds and to be highly educated than their multiparous peers (Falbo, 1978, 1983; Howarth, 1980). Since Chinese couples are limiting their family size in response to government policy rather than individual preference, the parents of only children in China are a far more heterogenous group. A considerable number of young parents who have only one child are not highly educated. Their child rearing practices may be correspondingly less liberal or developmentally appropriate (Chen & Kols, 1982; Falbo, 1987; Jing, Wan, & Over, 1987; Weisskopf, 1985).

The amount of school-base socialization children experience is also substantially different in China and the West. The effects of these difference have not been explored systematically. Children in urban areas of China typically begin in day care around the age of one and a half, spending eight hours a day and nearly 50 hours a week. Therefore, for only children in China, the sib-less home environment is partially compensated for by a significantly greater amount of collective experience in day care and school than is the case for only children in Western countries. Even those only children who are not enrolled in organized play groups or preschools, there are still more opportunities to experience spontaneous and varied interactions with peers than their Western counterparts enjoy, since China still largely remains a society of street life, public meetings, public squares, and open markets.

The cultural differences between Chinese and Western

societies are so great that it would seem quite difficult to apply the results of Western studies directly to the Chinese situation. Rather, it may be more beneficial to compare the psychological development and behavior of only children in China with that of other countries which have also experienced significant reductions in family size. Such comparisons may yield important information regarding the impact of social, political, and cultural factors on family planning and child development (Tseng et al, 1988).

One final concern about investigation of only children in China relates to the methodological shortcomings of existing studies. To date, investigators have relied almost exclusively on classroom observation and questionnaires. It is not clear whether classroom observers have been blind to the hypotheses researchers were investigating. If not, then it is entirely possible that their observations were colored by their own attitudes toward only children. It is quite possible that the inconsistencies between two surveys of Shanghai (1980) and Changsha teachers (Poston & Yu, 1985) may be due to these attitudinal differences rather than to actual behavioral variations of the children in the two cities, since both surveys were based upon the classroom teachers' evaluation.

Test reliability and validity is another problem which has plagued studies of Chinese only children. Of all the research reviewed above, only Chen's (1985a, 1985b) and Mao's (1984, 1987) studies reported cross-time or cross-observer reliabilities. Without evidence of test and rater reliabilities, it is difficult

to know how carefully the data were collected. In terms of test validity, there is evidence of misconceptualization or inappropriate use of measurement instruments. For instance, in Wang et al.'s (1983) study, test scores were tallied based upon check lists with dichotomous categories "pass" or "fail". However, children's behaviors are rarely "either" "or". Since there is no information from this study about the relative frequencies with which only and non-only children exhibit certain behaviors or qualities, it cannot conclude anything substantive about. This particular study also failed to take into account developmental continuities and discontinuities (Kagan, 1984; Strauss, 1982) when studying a wide age range of subjects. Wang et al. (1983) applied the same test items to all age groups, from infants to elementary school pupils, without considering the particular developmental characteristics of children at significantly different ages. A similar problem exists in Yang and Sun's study (1981), in which the same categories were used to guide observation from 3 to 12 year olds.

To conclude, in keeping with the ongoing Chinese population policy of holding the Mainland population to under 1.2 billion by the year 2000, the implementation of a one-child family program is in full swing. China's one-child family program is "one of the most significant social experiments ever attempted" (Ching, 1982). The study of only children is obviously crucial for the development of Chinese nation; an understanding of the psychology of single child families and cross-cultural examination of the factors contributing to the socialization of only children,

however, is of much broader significance as well.

Good descriptive studies of development of China's only children are still needed, as this research enterprise is still in its infancy. Until we can articulate the general characteristics of only children, it is fruitless to try to plan any principled educational design for facilitating the development of China's next generation. Experimental studies of only children in China will need to explore the factors effecting the development of particular social and behavioral characteristics as Liu (1988) has recently done. If hypothesized causal relationships can be confirmed by experimental research, we would gain both conceptual clarity about the factors influencing the socialization of children in different family structures and applied knowledge about how to facilitate the social development of only children (Wu, 1989). Finally, it is also important to think about how to take advantage of the positive characteristics of only children, rather than focusing heavily the undesirable aspects of their social and behavioral development. So, too, these characteristics will have to be evaluated in the broader social, economic, and political context of industrialization and this effect is long held cultural tradition and belief about proper and moral behavior. In any event, the impact of the education of this generation of only children will have a major significance for the qualitative improvement of the Chinese nation.

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Table 1

Percentage of Undesirable Behavioral Traits Demonstrated by Only and Non-Only Children

	Only Children		Non-only Children	
Undesirable Behavior	N=70	%	N=30	%
Bad eating habits	48	69	12	40
Willfulness	45	65	6	20
Timidity	35	50	8	27
Hostility	35	50	6	20
Carelessness for property	31	44	5	17
Lack of self-care	23	33	1	3
Disrespect for elders	19	27	1	3
Fascination with fancy dress	19	27	3	10

Source from Shanghai Preschool Educational Research Group (1980)

Table 2

Mean Differences of Behavioral Characteristics between Only and Non-only Children

	Kindergarten	Grader 1-2	Grade 3-5	Junior High	Senior High
Courtesy	0.04	0.5	0.36	2.68	0.33
Friendliness	0.17	0.94	0.03	1.29	0.37
Companionableness	0.42	2.00	0.04	4.65*	0.23
Fair mindedness	0.35	0.38	2.46	4.05*	0.26
Self control	0.17	2.29	7.11**	20.19**	5.71*
Diligence	0.04	11.0**	2.58	3.40	1.48
Thriftiness	2.60	6.77**	0.96	9.6**	____
Generosity	0.56	0.93	1.36	0.04	1.17
Initiative	0.02	6.9**	0.44	6.16*	0.20
Decisiveness	0.02	1.66	0.10	8.66**	0.81
Desire for improvement	2.18	3.8	0.10	15.88**	1.94

* $p < .05$, ** $p < .01$. Source from Wang et al. (1983).

Note: All the differences are favor of non-only children.

Table 3

Mean Ranks of Desirable Social and Behavioral Characteristics Exhibited by Children of different Age, Geographic Area, and Sibling Status.

	Age					
	4-6 (Rural)		4-6 (Urban)		9-10 (Urban)	
	Sibling N=30	Only N=30	Sibling N=75	Only N=75	Sibling N=75	Only N=75
Behavior monitoring						
Persistence	22.8	34.3	72.9	78.0	64.4	86.2
	z=3.40*		z=.72		z=3.07**	
Behavior control	30.6	30.5	73.2	77.7	82.3	61.2
	z=.05		z=.65		z=2.30*	
Frustration proneness	26.2	33.6	76.9	74.0	———	
	z=1.92		z=.40			
Social Behavior						
Cooperation	23.3	32.3	67.4	82.5	61.2	87.0
	z=3.20*		z=1.97*		z=5.17**	
Peer prestige	19.6	35.9	69.0	84.7	63.8	92.9
	z=4.82**		z=2.59**		z=3.29**	
Egocentrism	35.5	25.5	74.6	61.4	84.4	64.6
	z=2.19*		z=3.99**		z=2.50**	

* $p < .05$, ** $p < .01$. Source from Jiao et al. (1986)

Table 4

Conflicting Reports of Only Children's Undesirable Social Behaviors

Undesirable Traits	Shanghai Study N=100	Hunan Study N=559
Fussy eating habits	OC>NOC+	OC>NOC
Fascination with fancy dress	OC>NOC	OC>NOC
Carelessness of Property	OC>NOC	OC>NOC
Hostility	OC>NOC	NOC>OC
Willfulness	OC>NOC	NOC>OC
Disrespect for elders	OC>NOC	NOC>OC
Lack of self-care	OC>NOC	NOC=OC
Timidity	OC>NOC	NOC=OC
Noncooperativeness	-	NOC>OC
Dislike of labor work	-	NOC=OC

+ OC means only children and NOC means non-only children.

Source from Falbo (1987).

Table 5

Behavioral Problem Factor Scores of Chinese Girls With or Without Siblings

	Girls with Siblings (N=216)		Girls without Siblings (N=122)		
Behavior Problem Factor	Mean	SD	Mean	SD	F
Immature-somatic	8.48	1.37	8.48	1.17	0.00
Schizoid	7.31	0.80	7.30	1.38	0.00
Depression	13.44	1.53	13.16	0.45	3.99*
Moody	6.95	1.48	6.57	1.27	5.68*
Temper	17.04	3.46	16.30	3.21	3.70
Obsessive-neurotic	5.63	1.76	5.39	1 65	1.63
Aggression	19.56	3.73	20.39	5.75	2.55

* $p < .05$ Source from Tseng et al. (1988).

Table 6

Summary of the Reviewed Research Findings on Comparison between Only and Non-only children's Social/Behavioral Characteristics

Year of Research	Difference	No Difference
1980 - 1984	10 +	4
1985 - 1989	6 ++	9

+ ++: One study each is favor of only children.

Table 7

Different Occupation, Educational Level, and Child's Gender of Only-Child Certificate Holders and Non-Holders

	Holder (N=1000)		Non-Holder (N=1000)	
Sex of Only Children				
Male	607		492	
Female	393		508	
	Father	Mother	Father	Mother
Occupation				
Workers	412	569	488	546
Intellectuals	312	164	246	162
Cadres+	194	197	130	99
Others	82	70	136	193
Educational Level				
College	345	177	217	100
High School	440	573	549	608
Technical School	115	134	84	84
Primary School	93	91	141	165
Illiterate	7	24	9	3

+ Cadres include people who work for government agents, social services, military service, etc.

Source from Anhui Population Research Office (1982).